



Attachment: Claims as Amended

Claim 1 (currently amended):

A method of controlling or inhibiting an insect which comprises contacting said insect with effective amounts of a Protein A, a Protein B, and a Protein C, wherein:

- (i) said Protein A is a 230-290 kDa complex-forming protein that is derived from a first taxonomic species, and has an amino acid sequence at least 40% identical to SEQ ID NO:34 (XptA2<sub>Xwi</sub>);
- (ii) said Protein B is a 130-180 kDa complex-forming protein having an amino acid sequence at least 40% identical to SEQ ID NO:45 (TcdB2);
- (iii) said Protein C is a 90-120 kDa complex-forming protein having an amino acid sequence at least 35% identical to SEQ ID NO:47 (TccC3);

wherein said Protein A has activity against an insect, and said Protein B and said Protein C potentiate the activity of said Protein A, and said Proteins A, B, and C form a complex;

- (iv) at least one of said Protein B and said Protein C is derived from a second taxonomic species that is different from said first taxonomic species;
- (v) if said Protein B is derived from said second taxonomic species, then the amino acid sequence of said Protein B is less than 75% identical to the amino acid sequence of any protein known to be produced by said first taxonomic species; and
- (vi) if said Protein C is derived from said second taxonomic species, then the amino acid sequence of said Protein C is less than 75% identical to the amino acid sequence of any protein known to be produced by said first taxonomic species;

wherein a given protein is considered to be derived from a particular species if either the genome of that species contains a gene that encodes the protein or the given protein was designed by making conservative amino acid changes in the amino acid sequence of a protein encoded by a gene contained in the genome of that species; wherein a conservative amino acid change is replacing an amino acid of one class with an amino acid of the same class, wherein nonpolar-class amino acids are alanine, valine, leucine, isoleucine, proline, methionine, phenylalanine, and tryptophan, uncharged polar amino acids are glycine, serine, threonine, cysteine, tyrosine,

asparagine, and glutamine, acidic amino acids are aspartic acid and glutamic acid, and basic amino acids are lysine, arginine, and histidine.

Claim 2 (original):

The method of claim 1 wherein said first and second taxonomic species are from different genera.

Claim 3 (canceled).

Claim 4 (original):

The method of claim 2 wherein said Protein A is derived from a *Xenorhabdus* species and at least one of said Protein B and Protein C is derived from a *Photorhabdus*, *Paenibacillus*, *Serratia* or *Pseudomonas* species.

Claim 5 (original):

The method of claim 2 wherein at least one of said Protein A, Protein B, and Protein C is derived from a *Xenorhabdus* species and at least one of said Protein A, Protein B, and Protein C is derived from a *Photorhabdus* species.

Claim 6 (canceled).

Claim 7 (currently amended):

The method of claim 1 wherein:

- (i) Protein A is SEQ ID NO: 34(XptA2<sub>Xwi</sub>),
- (ii) Protein B is SEQ ID NO:45 (TcdB2), and
- (iii) Protein C is SEQ ID NO:47 (TccC3).

Claims 8-11 (canceled).

Claim 12 (currently amended):

The method of claim 5 wherein said Protein A is encoded by a polynucleotide that maintains hybridization under stringent conditions with a probe that is the full complement of a nucleic acid sequence that encodes SEQ ID NO:34 (XptA2<sub>Xwi</sub>), wherein said stringent conditions are 0.1X SSC and 0.1% SDS at 55° C.

Claim 13 (canceled).Claim 14 (currently amended):

The method of claim 8 wherein Protein B is encoded by a polynucleotide that maintains hybridization under stringent conditions with a probe that is the full complement of SEQ ID NO:45, or said Protein C is encoded by a polynucleotide that maintains hybridization under stringent conditions with a probe that is the full complement of a nucleic acid sequence that encodes SEQ ID NO:47 wherein said stringent conditions are 0.1X SSC and 0.1% SDS at 55° C.

Claims 15-20 (canceled).Claim 21 (currently amended):

A method of controlling or inhibiting an insect wherein said method comprises contacting said insect with effective amounts of a Protein A, a Protein B, and a Protein C, wherein

said Protein A is approximately 230-290 kDa, wherein a polynucleotide A that encodes said Protein A maintains hybridization under stringent conditions with the full complement of a nucleic acid sequence A that encodes a *Xenorhabdus* Class A toxin complex insect toxin;

said Protein B is approximately 130-180 kDa, wherein a polynucleotide B that encodes said Protein B maintains hybridization under stringent conditions with the full complement of a nucleic acid sequence B that encodes a Class B toxin complex potentiator;

said Protein C is approximately 90-120 kDa, wherein a polynucleotide C that encodes said Protein C maintains hybridization under stringent conditions with the full complement of a nucleic acid sequence C that encodes a Class C toxin complex potentiator;

said Protein A has activity against an insect and said activity is potentiated by said Protein B and said Protein C;

said Protein B and said Protein C potentiate the activity of said Protein A;

at least one of said polynucleotide B and polynucleotide C does not maintain hybridization under stringent conditions with a nucleic acid sequence that encodes a *Xenorhabdus* toxin complex potentiator; and

wherein said stringent conditions are 0.1X SSC and 0.1% SDS at 55° C.

Claim 22 (currently amended):

The method of claim 21 wherein said nucleic acid sequence A encodes SEQ ID NO:34 (XptA2<sub>Xwi</sub>).

Claim 23 (currently amended):

The method of claim 21 wherein nucleic acid sequence B encodes SEQ ID NO:45 (TcdB2).

Claim 24 (currently amended):

The method of claim 21 wherein nucleic acid sequence C encodes SEQ ID NO:47 (TccC3).

Claim 25 (previously presented):

The method of claim 21 wherein said nucleic acid sequence A encodes SEQ ID NO:34 (XptA2<sub>Xwi</sub>), nucleic acid sequence B encodes SEQ ID NO:45 (TcdB2), and nucleic acid sequence C encodes SEQ ID NO:47 (TccC3).

Claims 26-29 (canceled).Claim 30 (previously presented):

The method of claim 21 wherein said Class B toxin complex potentiator is from a *Photorhabdus*, *Paenibacillus*, *Serratia* or *Pseudomonas* species, and said Class C toxin complex potentiator is from a *Photorhabdus*, *Paenibacillus*, *Serratia* or *Pseudomonas* species.

Claim 31 (previously presented):

The method of claim 26 wherein said Class B toxin complex potentiator is from a *Photorhabdus*, *Paenibacillus*, *Serratia* or *Pseudomonas* species, and said Class C toxin complex potentiator is from a *Photorhabdus*, *Paenibacillus*, *Serratia* or *Pseudomonas* species.

Claim 32 (new):

A method of controlling or inhibiting an insect wherein said method comprises contacting said insect with effective amounts of a Protein A, a Protein B, and a Protein C, wherein  
said Protein A is a 230-290 kDa complex-forming protein having at least 47% identity with SEQ ID NO: 34 (XptA2<sub>Xwi</sub>) or a fragment thereof having pesticidal activity;  
said Protein B is a 130-180 kDa complex-forming protein having at least 56% identity with SEQ ID NO:45 (TcdB2);  
said Protein C is a 90-120 kDa complex-forming protein having at least 50% identity with SEQ ID NO:47 (TccC3); and  
said Protein A has activity against an insect and said activity is potentiated by said Protein B and said Protein C.

Claim 33 (new):

A method of controlling or inhibiting an insect wherein said method comprises contacting said insect with effective amounts of a Protein A, a Protein B, and a Protein C, wherein  
said Protein A is a 230-290 kDa complex-forming protein having at least 95% identity with SEQ ID NO: 34 (XptA2<sub>Xwi</sub>) or a fragment thereof having pesticidal activity;

said Protein B is a 130-180 kDa complex-forming protein having at least 56% identity with SEQ ID NO:45 (TcdB2);

said Protein C is a 90-120 kDa complex-forming protein having at least 50% identity with SEQ ID NO:47 (TccC3); and

said Protein A has activity against an insect and said activity is potentiated by said Protein B and said Protein C.